

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

FP04-0469-00

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2005/000070

International filing date (day/month/year)

06.01.2005

Priority date (day/month/year)

07.01.2004

International Patent Classification (IPC) or both national classification and IPC

Applicant

HITACHI CHEMICAL CO., LTD.

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input checked="" type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/000070

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/000070

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	7-10, 14, 16, 17	YES
	Claims	1-6, 11-13, 15, 18	NO
Inventive step (IS)	Claims		YES
	Claims	1-18	NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims		NO

2. Citations and explanations:

Document 1: JP 4-149237 A (Soken Chemical & Engineering Co., Ltd.), 22 May 1992
Document 2: JP 4-115407 A (Soken Chemical & Engineering Co., Ltd.), 16 April 1992
Document 3: JP 7-133466 A (Soken Chemical & Engineering Co., Ltd.), 23 May 1995
Document 4: JP 2002-167555 A (Hitachi Chemical Co., Ltd.), 11 June 2002
Document 5: JP 2002-167556 A (Hitachi Chemical Co., Ltd.), 11 June 2002
Document 6: JP 2002-164389 A (Hitachi Chemical Co., Ltd.), 07 June 2002
Document 7: WO 2001/059007 A1 (Hitachi Chemical Co., Ltd.), 16 August 2001

The inventions of claims 1-18 do not appear to possess novelty or to involve an inventive step based on the disclosures in documents 1-7 cited in the ISR.

Documents 1-3 respectively disclose a composition that uses conductive particles formed as a metal conductor film such as a Ni-Au composite film, etc. on a polymer particle core, with at least part of the conductor film surface coated and adhered with polymer particles of acrylic, etc. by a method such as dry blending, etc. The conductive particles are added to and dispersed in an insulating binder that contains a thermosetting resin, etc. and form an anisotropic conductive adhesive composition useful for connecting and adhering electrodes. They also disclose an electrical connection structure that connects and adheres electrodes using this composition and a manufacturing method therefor. In particular, documents 2 through 3 respectively disclose the point that the connection structure resists moisture/heat cycles.

Therefore the inventions of claims 1-6, 11-13, and 15 through 18 and the inventions disclosed in documents 1-3 have minor differences with regard to mass ratios, particle size ratios and coating percentages, etc. between tiny particles. But there is essentially no difference in the practical effect of the inventions due to these technical matters, and there are not special technical features. Therefore they appear to be essentially the same.

Also, upon comparing the inventions of claims 7-10, 14, and 16 through 17 with the inventions disclosed in documents 1-3, the inventions of claims 7-10, 14, and 16 through 17 respectively regulate the composition of the adhesive composition (claims 7-10) and the type of material adhered (claims 14 and 16 through 17), whereas documents 1-3 differ only in the point that they do not have specific disclosures regarding these technical matters. But they are also disclosed respectively in documents 4-7, and the relevant composition of the adhesive composition and the type of material adhered are only at least well-known art to a person skilled in the art prior to the priority date of this international application.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/000070

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The specification of this international application does not specifically disclose a method for coating part of the surface of conductive particles with insulating microparticles or purification of the conductive particles coated with insulating microparticles (removing insulating microparticles that did not coat).

However, in light of technical common sense, it is apparent that the shape of the insulating microparticles changes according to the type of coating method, and that if uncoated insulating microparticles are present, this will affect the quantitative measurement of the insulating microparticles used in coating.

Therefore the details disclosed in the specification of this international application are somehow technically unclear. Do the desired ratios (mass ratio, ratio of specific gravity, percentage of surface coated) disclosed in the claims intentionally provide an insulating microparticle coating? The technical significance of the various percentages disclosed in the claims is unclear.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/000070

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

Combining the technical matters disclosed in documents 4-7 with the inventions disclosed in documents 1-3, which belong to the same technical field, and constituting the inventions of claims 7-10, 14, and 16 through 17 does not appear to present any special technical difficulty.

Therefore the inventions of claims 1-18 would easily be carried out by a person skilled in the art based on the inventions disclosed in the above documents.